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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,250	12/21/2001	Lonnie O. Ingram	BCI-001CPA2CN	9349

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EXAMINER
PRATS, FRANCISCO CHANDLER

ART UNIT	PAPER NUMBER
1651	5

DATE MAILED: 05/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

SM.

Office Action Summary	Application No.	Applicant(s)	
	10/027,250	INGRAM ET AL.	
	Examiner	Art Unit	
	Francisco C Prats	1651	

-- The MAILING DATE of this communication appears on the cover sh et with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-25 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claims 1-25 are presented for examination.

Note that the preliminary amendment to the specification (item 5, page 2 of the submission of December 21, 2001), could not be entered because the duplication of quotation marks makes it unclear as to what applicant wishes to be entered.

Specification

The attempt to incorporate subject matter into this application by reference to applications referenced only by attorney docket number (page 11, lines 9 and 11) is improper because it is not clear which applications are being referenced.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakao et al (Ann. N.Y. Acad. Sci. 613(Enzyme Engineering 10):802-807 (1990)).

Nakao discloses a process for increasing the extent of saccharification of lignocellulose, whereby lignocellulose is

treated continuously with ultrasound at 20 kHz and a cellulase-containing microorganism, Trichoderma viride. Nakao therefore anticipates the cited claims.

Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Rolz (Biotech. Lett. 8(2):131-136 (1986)).

Rolz discloses a process for increasing the extent of saccharification of lignocellulose, whereby lignocellulose is treated continuously with ultrasound and cellulase. Nakao therefore anticipates the cited claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in

order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakao et al (Ann. N.Y. Acad. Sci. 613(Enzyme Engineering 10):802-807 (1990)).

As discussed immediately above, Nakao discloses the processes recited in claims 1 and 2. Nakao differs from the process recited in claim 5 in that Nakao does not apply the ultrasound discontinuously. However, the artisan of ordinary skill at the time of applicant's invention having before him the Nakao reference would have reasonably expected that the decision of whether to apply the ultrasonic irradiation continuously or discontinuously would have been a matter of design choice, either method being expected to function equivalently to the other. Thus, the recitation in claim 5, that the ultrasound be supplied discontinuously, would have been obvious to artisan of ordinary skill at the time of applicant's invention because the discontinuous ultrasound would have been considered equivalent to the continuous ultrasound used by Nakao.

Claims 7-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ingram et al (U.S. Pat. 5,424,202) in view of Nakao et al (Ann. N.Y. Acad. Sci. 613(Enzyme Engineering

10):802-807 (1990)) and Rolz (Biotech. Lett. 8(2):131-136 (1986)).

Ingram discloses the treatment of lignocellulosics, including wastepaper, using the claim-designated ethanologenic microorganisms. Ingram does not disclose the application of ultrasound to the lignocellulosic material, as recited in the claim. However, both Nakao and Rolz disclose that ultrasound treatment improves the saccharification of lignocellulose by cellulase. Thus, the artisan of ordinary skill at the time of applicant's invention would have been motivated by Nakao's and Rolz's disclosure, that lignocellulose saccharification processes can be improved by ultrasound treatment, to have modified the Ingram process by including the claimed ultrasound treatment. From the disclosures of the cited references, the artisan of ordinary skill would reasonably have expected that the ultrasound treatment would have improved the efficiency of the Ingram process. It is therefore respectfully submitted that the claimed process is properly considered prima facie obvious under § 103(a).

In sum, these claims fail to be patentably distinguishable over the state of the art discussed above and cited on the enclosed PTO-1449 and/or PTO-892. Therefore, the claims are properly rejected under 35 U.S.C. § 103.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,333,181. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims recite processes which comprise all of the steps recited in the claims under examination. That is, although the patented claims recite additional process steps when compared to the claims under examination, all of the process steps recited in the claims under examination are contained within the processes recited in the patented claims. Thus, despite the difference in

scope, the patented claims effectively anticipate the claims under examination.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francisco C Prats whose telephone number is 703-308-3665. The examiner can normally be reached on Monday through Friday, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G Wityshyn can be reached on 703-308-4743. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Francisco C Prats
Primary Examiner
Art Unit 1651

FCP
May 22, 2003